

## Return on Investment (ROI) Program Funding Application

This template was built using the ITE ROI Submission Intranet application.  
**FINAL AUDIT REQUIRED:** The Enterprise Quality Assurance Office of the Information Technology Enterprise is required to perform post implementation outcome audits for all Pooled Technology funded projects and may perform audits on other projects.

### This is an IOWAccess Revolving Fund Request.

Amount of funding requested:      Currently: \$278,063

Anticipated total: \$278,063

Section I: Proposal

<b>Date:</b>	7-02-07
<b>Agency Name:</b>	Iowa Veterans Home
<b>Project Name:</b>	Mobility, efficiency, and wireless network connectivity for the electronic health record initiative
<b>Agency Manager:</b>	Greg J. Wright
<b>Agency Manager Phone Number / E-Mail:</b>	(641) 753-4306 greg.wright@ivh.state.ia.us
<b>Executive Sponsor (Agency Director or Designee):</b>	Dan Steen, Commandant
<b>IOWAccess Project Process Phase:</b>	<input type="checkbox"/> Scope Analysis <input checked="" type="checkbox"/> Design Implementation

**A. Project Summary:** Describe the nature and use of the proposed project, including what is to be accomplished, how it will be accomplished, and what the costs and benefits will be.

This project will address the need for flexibility and mobility regarding data entry in the IVH electronic health record initiative. The electronic health record solution purchased by IVH contains many options for submissions to its database. Among the options are tablet pc's, pda's, touch screens, and wireless network devices. Funds supporting this project would allow for gained efficiencies in many areas. Reliance on stationary computer workstations has caused problems with efficiency and created a back log for date sensitive information. Touch screens, pda's, and tablet pc's would allow for greater mobility by the nursing staff and contribute to the real-time charting of health information. The wireless network backbone for these technologies and tools, located on all health care units campus wide at IVH, would make possible the timely entry of critical data for acute and long term care.

**B. Strategic Plan:** How does the proposed project fit into the strategic plan of the requesting agency?

IVH's mission statement is: "Caring – Our only reason for being". The implementation of this project will lead to a higher quality of care for residents in addition to gaining efficiency and allowing more time for direct care.

**C. Current Technology:** Provide a summary of the technology used by the current system. How does the proposed project impact the agency's technological direction? Are programming elements consistent with a Service Oriented Architecture (SOA) approach? Are programming elements consistent with existing enterprise standards?

Currently, IVH uses several different applications, on separate servers, with separate databases for health record information. IVH health care providers access these servers from stationary workstations located throughout the facility. Unfortunately, many of these stationary workstations are not in the vicinity of resident rooms or dormitories. All portable devices are stand-alone and have no network connectivity.

#### **D. Statutory or Other Requirements**

Is this project or expenditure necessary for compliance with a Federal law, rule, or order?

YES (If "Yes", cite the specific Federal law, rule or order, with a short explanation of how this project is impacted by it.)

**Explanation:**

Is this project or expenditure required by state law, rule or order?

YES (If "YES", cite the specific state law, rule or order, with a short explanation of how this project is impacted by it.)

**Explanation:**

HIPAA regulations significantly impact the Iowa Veterans Home. The availability and convenience of security enabled touch screens, tablet pc's, and other mobile devices, combined with less reliance on paper charting, the likelihood of misplaced or lost confidential information is significantly reduced.

Does this project or expenditure meet a health, safety or security requirement?

YES (If "YES", explain.)

**Explanation:**

More efficient, immediate, and quality care will be provided to veterans with the implementation of this project. Real-time charting and reporting will result in improved acute care. Integrating the pharmacy program into the health record will safeguard against errors in medicine dosage.

Is this project or expenditure necessary for compliance with an enterprise technology standard?

YES (If "YES", cite the specific standard.)

**Explanation:**

**[This section to be scored by application evaluator.]**

**Evaluation (15 Points Maximum)**

If the answer to these criteria is "no," the point value is zero (0). Depending upon how directly a qualifying project or expenditure may relate to a particular requirement (federal mandate, state mandate, health-safety-security issue, or compliance with an enterprise technology standard), or satisfies more than one requirement (e.g. it is mandated by state and federal law and fulfills a health and safety mandate), 1-15 points awarded.



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## **E. Impact on Iowa's Citizens**

**1. Project Participants** - List the project participants (i.e. single agency, multiple agencies, State government enterprise, citizens, associations, or businesses, other levels of government, etc.) and provide commentary concerning the nature of participant involvement. Be sure to specify who and how many **direct** users the system will impact. Also specify whether the system will be of use to other interested parties: who they may be, how many people are estimated, and how they will use the system.

The employees of the Iowa Veterans Home will be the consumers of these technologies. Primarily, the staff of over 400 direct care nurses will utilize these mobility devises.

**2. Service Improvements** - Summarize the extent to which the project or expenditure improves service to Iowa citizens or within State government. Included would be such items as improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, etc.

The veterans of the state of Iowa and their families will be the beneficiaries of this project. Quality of life and quality of care will be the result of the implementation and as a result of the efficiencies and re-allocated time, more direct care can be provided. Immediate and accurate resident information and charting will be available at many points on the units.

**3. Citizen Impact** – Summarize how the project leads to a more informed citizenry, facilitates accountability, and encourages participatory democracy. If this is an extension of another project, what has been the adoption rate of Iowa’s citizens or government employees with the preceding project?

The citizens of the state of Iowa will have confidence the veterans are being well provided for, that IVH is current with the technologies that have proven to be effective and the privacy and confidentiality of their information is being protected.

**4. Public Health and/or Safety** – Explain requirements or impact on the health and safety of the public.

**[This section to be scored by application evaluator.]**  
**Evaluation (15 Points Maximum)**

- Minimally directly impacts Iowa citizens (0-5 points).
- Moderately directly impacts Iowa citizens (6-10 points).
- Significantly directly impacts Iowa citizens (11-15 points).



**[This section to be scored by application evaluator.]**  
**Evaluation (10 Points Maximum)**

- Minimally improves customer service (0-3 points).
- Moderately improves customer service (4-6 points).
- Significantly improves customer service (7-10 points).



## **F. Process Reengineering**

Provide a pre-project or pre-expenditure (before implementation) description of the impacted system or process. Be sure to include the procedures used to administer the impacted system or process and how citizens interact with the current system.

**Response:**

Currently, IVH utilizes several different software vendors and programs to complete the health record of veterans. We pay the software and maintenance fees for support of the various applications and the training costs associated in a multi application environment. Requests by citizens for records, financial information (including 1099-int tax forms) and other important information, is a timely process, and involves a multi-disciplinary approach to address.

Provide a post-project or post-expenditure (after implementation) description of the impacted system or process. Be sure to include the procedures used to administer the impacted system or process and how citizens will interact with the proposed system. In particular, note if the project or expenditure makes use of information technology in reengineering traditional government processes.

**Response:**

The ability to input veteran health information directly into a single database structure will facilitate efficiency in the response of requests from the citizenry. In

addition, the banking, billing, Medicare, and Medicaid reimbursement procedures will be improved by the real-time tracking of services provided.

**[This section to be scored by application evaluator.]**  
**Evaluation (10 Points Maximum)**

- Minimal use of information technology to reengineer government processes (0-3 points).
- Moderate use of information technology to reengineer government processes (4-6 points).
- Significant use of information technology to reengineer government processes (7-10).



**G. Timeline**

Provide a projected timeline for this project. Include such items as **start date**, planning, database design, coding, implementation, testing, conversion, parallel installation, and date of final release. Also include the parties responsible for each item.

Start date no later than January 1, 2008 for installing hardware on units, planning, and testing care plans. Actual implementation would be no later than April 1, 2008. The agency IRCC committee members will be responsible for testing prior to implementation.

RNs, social workers, recreation therapists, and dietitians would be responsible for creating the IRCC care plan which in turn will flow into the RTW assignments on the touch screens. RTWs will be responsible for documenting on the touch screens.

**[This section to be scored by application evaluator.]**  
**Evaluation (10 Points Maximum)**

- The timeline contains several problem areas (0-3 points).
- The timeline seems reasonable with few problem areas (4-6 points).
- The timeline seems reasonable with no problem areas (7-10).



**H. Funding Requirements**

On a fiscal year basis, enter the estimated cost by funding source: Be sure to include developmental costs and ongoing costs, such as those for hosting the site, maintenance, upgrades.

	FY08		FY09		FY10	
	Cost(\$)	% Total Cost	Cost(\$)	% Total Cost	Cost(\$)	% Total Cost

State General Fund	\$0	0%	\$0	0%	\$0	0%
Pooled Tech. Fund /IOWAccess Fund	\$278,063	100%	\$0	0%	\$0	0%
Federal Funds	\$0	0%	\$0	0%	\$0	0%
Local Gov. Funds	\$0	0%	\$0	0%	\$0	0%
Grant or Private Funds	\$0	0%	\$0	0%	\$0	0%
Other Funds (Specify)	\$8,387	100%	\$8,722	100%	\$9,071	100%
<b>Total Project Cost</b>	<b>\$278,063</b>	<b>100%</b>	<b>\$0</b>	<b>0%</b>	<b>\$0</b>	<b>0%</b>
Non-Pooled Tech. Total	\$8387	100%	\$8,722	100%	\$9,071	100%

"Other Funds" self-generated funds that the Iowa Veterans Home receives and gets to keep as a "net budgeting" agency.

**[This section to be scored by application evaluator.]**

**Evaluation (10 Points Maximum)**

- The funding request contains questionable items (0-3 points).
- The funding request seems reasonable with few questionable items (4-6 points).
- The funding request seems reasonable with no problem areas (7-10).



**I. Scope**

Is this project the first part of a future, larger project?

- YES (If "YES", explain.)     **NO** This application is for a stand-alone project.

**Explanation:**

Is this project a continuation of a previously begun project?

- YES (If "YES", explain.)

**Explanation:**

This project addresses the hardware needs of a previously approved ROI software package for IVH's electronic health record project. Included in this ROI application is the hardware (tablet pc's for med carts, touch screens, pda's) and network devices (wireless connectivity to the units) needed to implement the mobility, availability, and efficiency aspect of the electronic health record project.

**[This section to be scored by application evaluator.]**

**Evaluation (10 Points Maximum)**



- This is the first year of a multi-year project / expenditure or project / expenditure duration is one year (0-5 points)
- The project / expenditure is of a multi-year nature and each annual component produces a definable and stand-alone outcome, result or product (2-8 points).
- This is beyond the first year of a multi-year project / expenditure (6-10 points)

The last part of this criteria involves rating the extent to which a project or expenditure is at an advanced stage of implementation and termination of the project / expenditure would waste previously invested resources.

## J. Source of Funds

On a fiscal year basis, how much of the total project cost (\$ amount and %) would be absorbed by your agency from non-Pooled Technology and/or IOWAccess funds? If desired, provide additional comment / response below.

### Response:

The on-going maintenance costs would be absorbed by the Iowa Veterans Home. Projected annual costs adjusted for future inflation are ('08 \$8,387); ('09 \$8,722); ('10 \$9,071).

**[This section to be scored by application evaluator.]**

### **Evaluation (5 Points Maximum)**

- 0% (0 points)
- 1%-12% (1 point)
- 13%-25% (2 points)
- 25%-38% (3 points)
- 39%-50% (4 points)
- Over 50% (5 points)



## Section II: Financial Analysis

### A. Project Budget Table

It is necessary to estimate and assign a useful life figure to each cost identified in the project budget. Useful life is the amount of time that project related equipment, products, or services are utilized before they are updated or replaced. In general, the useful life of hardware is three (3) years and the useful life of software is four (4) years. Depending upon the nature of the expense, the useful life for other project costs will vary between one (1) and four (4) years. On an exception basis, the useful life of individual project elements or the project as a whole may exceed four (4) years. Additionally, the ROI calculation must include all new annual ongoing costs that are project related.

The Total Annual Prorated Cost (State Share) will be calculated based on the following equation:

$$\left[ \left( \frac{\text{Budget Amount}}{\text{Useful Life}} \right) \times \% \text{ State Share} \right] + (\text{Annual Ongoing Cost} \times \% \text{ State Share}) = \text{Annual Prorated Cost}$$

Budget Line Items	Budget Amount (1st Year Cost)	Useful Life (Years)	% State Share	Annual Ongoing Cost (After 1st Year)	% State Share	Annual Prorated Cost
Agency Staff		1	0.00			\$0.00
Software		4	0.00			\$0.00
Hardware	\$246,563	3	100%			\$246,563
Training	\$10,500	4	100%			\$10,500
Facilities		1	0.00			\$0.00
Professional Services	\$21,000	4	100%			\$21,000
ITD Services		4	0.00			\$0.00
Supplies, Maint, etc.		1	0.00	\$8,722	100%	\$8,722
Other		1	0.00			\$0.00
<b>Totals</b>	\$278,063			\$8,722*		\$286,785

\* Showing 2<sup>nd</sup> year out only. IVH plans to absorb on-going maintenance costs.

## B. Spending plan

Pooled Tech. funds would be applied towards implementation. The Iowa Veterans Home in turn would absorb future on-going maintenance costs.

## C. Tangible and/or Intangible Benefits

**Respond to the following and transfer data to the ROI Financial Worksheet as necessary:**

**1. Annual Pre-Project Cost** - This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation. **Quantify actual state government direct and indirect costs** (personnel, support, equipment, etc.) associated with the activity, system or process prior to project implementation.

**Describe Annual Pre-Project Cost:**

Overall, operational costs will not necessarily be reduced; rather, the Iowa Veterans Home will reallocate time saved to providing more direct nursing care for our residents. The dollar savings would come from reductions or eliminations from transcribing IRCC care plans to bedside nursing care plans, updating and reprinting bedside care plans monthly, reviewing updates for accuracy and signing bedside care plans monthly. In addition, money spent on paper and printer ink for care plans will decrease, and improved communication between RN and RTW will occur creating more accurate MDS 2.0 data being sent to CMS.

**Quantify Annual Pre-Project Cost:**

	<b>State Total</b>
<b>FTE Cost(salary plus benefits):</b>	\$303,830
<b>Support Cost (Paper and related ink cartridges):</b>	\$ 12,556
<b>Other Cost (expense items other than FTEs &amp; support costs, i.e. indirect costs if applicable, etc.):</b>	\$ 0.00
<b>Total Annual Pre-Project Cost:</b>	<b>\$316,386</b>

**2. Annual Post-Project Cost** - This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation. **Quantify actual state government direct and indirect costs** (personnel, support, equipment, etc.) associated with the activity, system or process after project implementation.

**Describe Annual Post-Project Cost:**

Paperwork from typing and printing bedside care plans (RTW assignments) will be eliminated with the implementation of the touch screen modules, thus decreasing costs of paper, ink, folders for storing bedside care plans, and other miscellaneous office supplies. There would also be a decrease in staff time required for duplicate entries of IRCC care plans to bedside care plans. Data entry should be more accurate decreasing staff time spent in preparing for DIA inspections. The initial assessment of a resident will automatically create an initial care plan decreasing RN time spent creating care plans at admission for RTWs to follow. With the decrease in duplicate entry, RNs and NUCs will be able to concentrate on providing more direct nursing care.

**Quantify Annual Post-Project Cost:**

	<b>State Total</b>
<b>FTE Cost(salary plus benefits):</b>	\$303,830
<b>Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):</b>	\$ 0.00
<b>Other Cost (expense items other than FTEs &amp; support costs, i.e. indirect costs if applicable, etc.):</b>	\$ 0.00
<b>Total Annual Post-Project Cost:</b>	<b>\$303,830</b>

**3. Citizen Benefit** - Quantify the estimated annual value of the project to Iowa citizens. This includes the "hard cost" value of avoiding expenses ("hidden taxes") related to conducting business with State government. These expenses may be of a personal or business nature. They could be related to transportation, the time expended on the manual processing of governmental paperwork such as licenses or applications, taking time off work, mailing, or other similar expenses. As a "rule of thumb," use a value of \$10 per hour for citizen time.

Describe savings justification:

The ability to input veteran health information directly into a single database structure will facilitate efficiency in the response to request from the citizenry.

<b><u>Transaction Savings</u></b>	
Number of annual online transactions:	N/A
Hours saved/transaction:	N/A
Number of Citizens affected:	N/A
Value of Citizen Hour	N/A
Total Transaction Savings:	N/A
Other Savings (Describe)	N/A
<b>Total Savings:</b>	N/A

**4. Opportunity Value/Risk or Loss Avoidance** - Quantify the estimated annual non-operations benefit to State government. This could include such items as qualifying for additional matching funds, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, avoiding the consequences of not complying with State or Federal laws, providing enhanced services, avoiding the consequences of not complying with enterprise technology standards, etc.

**Response:**

HIPAA regulations significantly impact the Iowa Veterans Home. The availability and convenience of security enabled touch screens, tablet pc's, and other mobile devices, combined with less reliance on paper charting, the likelihood of misplaced or lost confidential information is significantly reduced.

The citizens of the state of Iowa will have confidence that the veterans are being well provided for, that IVH is current with the technologies that have proven to be effective and that the privacy and confidentiality of their information is being

<b>ROI Financial Worksheet</b>	
A. Total Annual Pre-Project cost (State Share from Section II C1):	\$316,386
B. Total Annual Post-Project cost (State Share from Section II C2):	\$303,830
State Government Benefit (= A-B):	\$12,556
Annual Benefit Summary:	
State Government Benefit:	
Citizen Benefit:	
Opportunity Value or Risk/Loss Avoidance Benefit:	\$303,830
C. Total Annual Project Benefit:	\$316,388
D. Annual Prorated Cost (From Budget Table):	\$278,063
<b>Benefit / Cost Ratio: (C/D) =</b>	1.14
<b>Return On Investment (ROI): ((C-D) / Requested Project Funds) * 100 =</b>	13.78

protected.

More efficient, immediate, and quality care will be provided to veterans with the implementation of this project. Real-time charting and reporting will lead to improved acute care. Integrating the pharmacy program into the health record will safeguard against errors in medicine dosage.

**5. Benefits Not Readily Quantifiable** - List and summarize the overall non-quantifiable benefits (i.e., IT innovation, unique system application, utilization of new technology, hidden taxes, improving the quality of life, reducing the government hassle factor, meeting a strategic goal, etc.).

**Response:**

Nursing staff will have time freed from completing paperwork to spend more direct care time with our residents. In addition, staff should experience a less rushed environment that will hopefully translate in fewer errors occurring.

Having this technology may assist us in the recruitment of highly sought after nursing personnel. We have experienced tremendous competition to hire nursing staff. Having this technology may motivate perspective hires to give us a second look.

**[This section to be scored by application evaluator.]  
Evaluation (15 Points Maximum)**

- The financial analysis contains several questionable entries and provides minimal financial benefit to citizens (0-5 points).
- The financial analysis seems reasonable with few questionable entries and provides a moderate financial benefit to citizens (6-10 points).
- The financial analysis seems reasonable with no problem areas and provides maximum financial benefit to citizens (11-15).



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## Appendix A. Auditable Outcome Measures

For each of the following categories, list the auditable metrics for success after implementation and identify how they will be measured.

### 1. Improved customer service

More direct care from nursing staff to residents  
(Measure the reduction in non direct care time due to gained efficiencies)

Improved charting and improved diagnosis's  
(Accuracy of information confirmed by audit)

### 2. Citizen impact

Veteran care is improved  
(Audit, infection rate, mental health statistics)

Quality of life is improved  
(Family testimonial, resident testimonial)

### 3. Cost Savings

Greater efficiency in providing direct care

Direct care hours are increased

### 4. Project reengineering

The Iowa Veterans Home will be going from a very paper intensive process to virtually, a paperless system. This will be a revolutionary change in our way of conducting business.

### 5. Source of funds (Budget %)

Pooled Tech funding will be used to purchase the equipment & software. On-going maintenance costs will be absorbed by the Iowa Veterans Home.

### 6. Tangible/Intangible benefits

Veteran care is improved  
(Audit, infection rate, mental health statistics)

Quality of life is improved  
(Family testimonial, resident testimonial)

Greater efficiency in direct care  
(Direct nursing care hours are increased)

Improved charting and improved diagnosis's  
(Accuracy of information confirmed by audit)